

12 February 2016

Dr Ron Ben-David, Chairperson
Essential Services Commission
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Melbourne, Victoria 3000

Lodged via energy.submissions@esc.vic.gov.au

Dear Dr Ben-David,

Inquiry into the true value of distributed generation – Proposed Approach Paper

Thank you for the opportunity to respond to the Proposed Approach Paper (the Paper) for the inquiry into the true value of distributed generation (DG).

Simply Energy is a leading energy retailer servicing Victoria, South Australia, New South Wales and Queensland. Simply Energy is based in Victoria and makes a significant contribution to the Victorian economy.

Additionally, Simply Energy's group includes Simply Energy Solutions Pty Ltd, which includes business lines providing DG and energy efficiency services to customers. Simply Energy considers that this business line and the industry it operates in are best served by a competitive market driven primarily by private benefits, rather than being overwhelmed by subsidies. Subsidies change in response to unpredictable political factors, and as a result lead to volatility in the industry, which is to the long term detriment of DG consumers.

Overall approach to the inquiry

Simply Energy broadly supports the approach outlined in the Paper, which includes separating the inquiry into two parts. The first part will look at energy value and the second at network value.

The terms of reference from the Minister for Finance require the inquiry to examine the social value of DG. Victorian consumers should not have to pay investors for the public benefits of DG unless they are clearly shown to exist and are correctly valued. This is a challenge for social benefits, which are notoriously difficult to value.

Simply Energy supports the Commission's materiality principle set out on page 6 of the Paper. Immaterial benefits should be ignored as otherwise the cost of calculating and managing payments for them will outweigh the benefits, reducing the net benefits to consumers as a whole.

However, the question of what will be considered to be sufficient evidence for the existence and value of benefits remains. For example, poorly constructed and biased 'evidence' may appear to demonstrate that a particular benefit is material. This is a particular problem for social benefits.

Unfortunately the Paper does not indicate the standard of evidence that the Commission intends to apply.

Simply Energy urges the Commission to state clearly what it will consider to be sufficient evidence for the existence and value of benefits. This is in the interests of consumers in reaching a worthwhile outcome, as stakeholders will be able to engage with the inquiry knowing the standards that they have to meet.

The socially optimal level of investment in DG

The Paper states that the goal of the inquiry is to recommend payment structures that support the socially optimal level of investment in DG.

There seems to be an unstated premise that the current level of investment in DG is below the socially optimal level, because investors are not currently being provided with incentives that capture all of the public benefits provided by DG.

If the inquiry finds that this is the case, and the Commission recommends that payments to investors in DG are increased so that they are compensated further (by other consumers) for the public benefits of their investments, then it is not economically justified or in the interests of consumers in general that existing DG investments receive the increased compensation.

Any increased compensation should only be payable to future investments. This is implicit in the Commission's 'behavioural response' principle set out on page 6 of the Paper. This is an important principle because DG investments that have already been made must have provided sufficient benefits to the investors, otherwise the investments would not have been made. These benefits would have included tangible benefits (including avoided electricity costs, feed-in credits, Renewable Energy Target certificate payments, and increased property value) and intangible private benefits such as the sense of doing something for the environment.

Incentives to achieve the socially optimal level of DG investment should therefore be directed to future DG investments, because these are the investments that will close any identified gap between the current level of DG investment and the socially optimal level. For example, the next cohort of investors may need a higher level of tangible benefits to offset their lower level of intangible private benefits compared with previous investor cohorts.

Providing increased compensation to existing DG investments will not do anything to close any identified investment gap: only additional investment can do that. If the payments made to existing DG investors are increased this will be a windfall gain to these investors at the expense of other consumers. This is a suboptimal use of the resources of other consumers, which should be used to efficiently incentivize future investments, should that be recommended.

For the avoidance of doubt, Simply Energy considers that the evidence of continuing investment in DG with the current level of subsidies indicates that investors are already obtaining sufficient private benefits to invest, and that these exceed the public benefits of the investment. As a result,

increasing the regulated payments to future DG investors is not an appropriate use of other consumers' resources. AEMO calculates that 193 MW of capacity was added in Victoria during 2014-15¹. This is 18 MW higher than the capacity added in 2012-13, the last year that Victorian premium tariff schemes were open to new installations.

Furthermore, the opportunity cost of DG subsidies and the actual money used to provide the subsidies should not be ignored or considered in isolation. Forced spending consumed on DG is spending that would not be directed at other benefits, which are lost. The benefits from the DG are likely to be lower than the lost benefits. This is because the consumption preference for the lost benefits is already revealed in the free market by the choices that exclude DG.

Recommending policy or regulatory reforms

The terms of reference require the Commission to recommend policy or regulatory reforms that are required to ensure effective compensation of the value of DG.

The Paper sets out three principles that the Commission will apply:

- Materiality
- Simplicity
- Behavioural response.

Simply Energy supports these principles, but considers that further detail is needed about the criteria that the Commission will apply when considering its recommendations. These criteria are critical, as otherwise recommendations may be made that are impossible to implement or that lead to lower net benefits overall due to the costs required to meet the new requirements. This is particularly the case where a potential recommendation requires a trade-off of the principles the Commission intends to apply.

For example, the Paper states that the Commission is considering locational and time-of-use payments to DG investors. The Commission may consider that some of the locational and time-of-use differences are material. However, the payment structure needed to implement them may be highly complex, which is against the Commission's simplicity principle.

Simplicity is important because it may be impossible for industry to implement a system of highly granular regulated DG payments, which reflect the variability of the wholesale market and the variability of the value of capacity at different locations and times. Any payment regime must be able to be clearly communicated to customers, billed correctly, and explained to customers when they inquire about their bills.

As a result, Simply Energy considers that the Commission should provide stakeholders with the detailed criteria that it will use when considering its recommendations, including how it will trade off between principles. This is in the interests of consumers, as it will support credible and worthwhile recommendations being made.

¹ AEMO. 2015 PV installed capacity and saturation limit forecast.
<http://www.aemo.com.au/Electricity/Planning/Forecasting/National-Electricity-Forecasting-Report/NEFR-Supplementary-Information>. Viewed 12/2/2016.

Responses to questions raised in the Paper

In this section Simply Energy responds to those of the ESC's questions (shown below in italics) that it has sufficient experience to answer. In general, Simply Energy has not responded to questions that relate to how networks engage with DG investors.

- 1. Do you agree with how the Commission is proposing to define true value? If not, why not? Are there any other definitions the Commission could use?*

Page 3 of the Paper states that the true value of DG means a return to investors that captures all the benefits of the investment.

Simply Energy does not agree with this definition because it omits the other component of value, which is cost. For an investor to see the true value of a potential investment they need to be exposed to all the costs as well as all the benefits of the investment.

It is insufficient to attempt to reward the investor for all the public benefits of the investment without also exposing the investor to all the public costs of the investment. For example, if the investor is to be rewarded for the public benefits of carbon emission reductions then the investor should also see the public cost of the carbon emissions associated with the manufacture, installation, operation, maintenance and ultimate disposal of the DG equipment. Currently both these benefits and costs are unpriced, as there is no general carbon price.

- 2. Do you agree with the Commission's view that this Inquiry is focussed on identifying the public benefit of distributed generation? If not, why not?*

Simply Energy agrees that the focus should be on public benefits rather than private benefits. Private benefits of DG investments are solely a matter for the investor. This is the same as for other significant investments that households may make (such as a new car or new house) – the private benefits they may obtain from the investment are solely a matter for the investor.

However, as discussed in the response to question 1, the true value of DG to the public is not made up solely of benefits, but also potentially of costs. Given the scope and importance of this inquiry it is inadequate to assume that all the costs of DG are reflected in the prices paid that are thus borne by the investor. For example, lithium battery-based storage has been identified as a fire risk. The public costs of this additional risk are not currently reflected in the price paid by an investor for such a system, or the fire services charges they may pay. Similarly, the public may incur additional costs to dispose of or recycle DG equipment when the investor retires it.

As a result, it would be inequitable to require other consumers to pay a feed-in tariff to DG investors that attempts to transfer all potential public benefits to the investor, while DG investors impose additional costs that are borne by the public without charge. As a result, Simply Energy considers that the inquiry should also consider public costs relating to DG, as the other component of public value.

The cost to the public of inefficient policy settings can be considerable. For example, the Grattan Institute estimates the impact of state government feed-in tariff schemes as follows:

“State governments began winding back the schemes in 2012, but by the time the last runs out in 2028 they will have cost the economy \$9 billion. Worse, people who chose not to install solar, or could not afford it, have paid for the schemes through a subsidy to solar PV owners worth \$14 billion”.²

3. Do you agree with how the Commission is proposing to define public benefit as it relates to distributed generation?

The Commission proposes to split public benefit into 3 components – economic, environmental, and social, for each source of value (energy and network).

Leaving network value aside, Simply Energy supports the split into economic and environmental components of energy value. These are generally well understood and quantifiable.

The terms of reference from the Minister require the Commission to examine social value. Page 4 of the Paper defines social benefit as “public benefits not attributable to economic or environmental outcomes.”

Simply Energy considers that this definition does not reflect the terms of reference. This definition creates a catch-all category for any other potential benefits, rather than providing a definition of a specific type of benefit.

The Commission needs instead to properly define public social benefits. A possible definition could be the benefits accruing to the public from their enhanced social relations. Benefits meeting this definition could be increased social cohesion due to the shared sense of working as a community to generate energy for our neighbourhood, or greater cooperation between neighbours based on the shared appreciation of the DG investments being made by some.

5. Do you agree with the Commission’s proposed approach to the inquiry? If not, why not, and what alternative approach would you propose?

Simply Energy supports the Commission’s proposed approach to separate the inquiry into two parts, one relating to the energy value of DG and the other relating to the network value of DG. The benefits and costs relating to energy value and network value are very different and separating them provides clarity and improves manageability. Also, energy value principally affects retailers, whereas network value principally affects network businesses. Separating the inquiry will assist businesses in engaging efficiently with the inquiry.

See also the comments in the ‘Overall approach to the inquiry’, ‘The socially optimal level of investment in DG’ and ‘Recommending policy or regulatory reforms’ sections above.

² Grattan Institute. <https://grattan.edu.au/report/sundown-sunrise-how-australia-can-finally-get-solar-power-right/>. Viewed 12/2/2016.

6. *Do you agree with how the Commission is proposing to define distributed generation? If not, why not?*

The Commission proposes to include all technologies that can feed energy into the grid, including storage. It makes sense to address different technologies in this inquiry, as otherwise the issues covered will need to be addressed again for other technologies.

However, costs and benefits vary by technology. For example, gas-fired distributed generation has lower energy-value carbon benefits than wind generation, and storage (considered by itself, rather than coupled with a generator such as wind or solar) has negative carbon benefits due to the loss of energy from charging and discharging, given that all storage is less than 100% efficient.

Therefore it is likely that the Commission's definition will lead to examination of the benefits relating to individual technologies. As a result, complex payment structures may be favoured as reflecting material differences in benefits. This would go against the Commission's simplicity principle. However, a simple payment structure that averages between technologies is likely to fail to meet the Commission's behavioural response principle, because it may lead to overinvestment in technologies that provide lower public benefits.

The Paper states that the inquiry will look at DG with capacity of less than five megawatts (MW). Currently the Victorian regulated feed-in-tariff (FiT) applies to DG up to 100 kilowatts (kW) capacity. In other states regulated FiTs are limited to systems of five or ten kW capacity. Five MW is 50 times the current Victorian maximum capacity for regulated FiT and up to 1,000 times the maximum capacity used elsewhere.

Simply Energy considers that capacity of five MW is too high for automatic eligibility to regulated payments, which are ultimately recovered from other consumers. Projects at this scale are large enough that they require considerable individual planning and a high level of operational and financial expertise.

7. *Are there other definitions of distributed generation the Commission could consider?*

As discussed in response to question 6, Simply Energy considers that the inquiry should be restricted to DG up to 100 kW capacity, at the very most. The goal of the inquiry is to develop payment structures to incentivize DG investments. If these include regulated FiTs that are ultimately paid by other consumers, then these should be limited to genuinely small systems (under 10 kW, for example), as investors in larger systems have sufficient scale to negotiate with potential purchasers of their outputs. Additionally, systems as small as 10 kW are able to create Large-scale Generation Certificates, which are currently trading at approximately \$80 per MWh.

8. *Are there other public benefits that the electricity generated by a distributed generator provides? How can these identified benefits be quantified?*

The Paper states that the Essential Services Commission's (the Commission) preliminary assessment has failed to find any social benefits that are readily quantifiable. Simply Energy is not surprised at this outcome, as social benefits are notoriously difficult to identify and value.

10. Are there other aspects of the current regulatory framework outlined in this paper that the Commission should consider when evaluating the adequacy of the current Victorian policy and regulatory frameworks governing the remuneration of distributed generation?

Simply Energy's response considers energy value only. Simply Energy considers that the current regulatory framework already provides DG investors with payment for all the energy value public benefits of their investments, or opportunities to obtain these payments.

Examples include the Small Generation Aggregator (SGA) rules, which allow distributed generators to obtain wholesale market prices for their output through an intermediary SGA market participant.

Additionally, the Small-scale Renewable Energy Scheme (SRES) pays eligible SRES investors the whole public benefit of carbon emissions reductions and an additional premium. SRES payments are ultimately recovered by retailers from consumers through charges for grid-delivered electricity.

The investor can receive Small-scale Technology Certificates (STCs) up front based on a 15-year deeming period. One kW of rooftop photovoltaic (PV) capacity, for example, generates an average of approximately 3.25 kilowatt-hours (kWh) per day in Victoria. This is approximately 18,000 kWh over the 15 year deeming period. This avoids approximately 20 tonnes of carbon (CO₂e) emissions. At a carbon price of \$25/tonne the value of the avoided emissions is \$500.

1.18 STCs are provided for each kW of PV installed in Victoria, for each year of the 15-year deeming period. This gives a total per kW of approximately 18 STCs. At the current STC price of \$40 this represents a payment to the investor of \$720. This is a premium above the public value of avoided carbon emissions of over 40%.

11. What is the impact of the current regulatory framework on the valuation of distributed generation in Victoria? In particular, what has been the scale and scope of support provided to distributed generators by: avoided TUoS payments, avoided DUoS payments, network Support Payments, the Distribution Network Pricing and Assessment Framework, and the RIT-D?

Simply Energy understands, from material provided by distribution businesses as part of their Tariff Structures Statement (TSS) consultations, that DG investors in Victoria continue to receive significant cross-subsidies from other consumers. DG investors receive cross subsidies because the usage-based network tariff structures enable them to reduce their TUoS and DUoS charges below the level of costs incurred in servicing them. This shortfall is recovered from other consumers.

12. Do you agree with the Commission's proposal to develop a methodology for calculating the time-of-use benefit of the electricity produced by a distributed generator? If not, why not?

Simply Energy does not support regulated time-of-use FiTs because any benefits will be insufficient to cover the increased costs.

Industry and consumers will incur significant costs relating to communicating, understanding, and billing the more complex structure. Time of use tariffs for electricity consumption have had a minimal take up, with most consumers finding them complex and confusing. It has not been demonstrated that time-of-use FiTs will be received differently by consumers.

Additionally, Simply Energy considers that this approach is against the Commission's simplicity principle.

Furthermore, a strongly time differentiated FiT with a high energy value at peak times increases the risk that incentives are given to develop DG in locations where the additional cost to the network exceeds the value of the additional energy. This will lead to net costs for the network's customers in aggregate.

13. Which of the two time-of-use options presented do you favour?

Simply Energy does not support regulated time-of-use feed-in tariffs. Of the two options presented the Frontier Economics approach for IPART, which provides a higher FiT during a brief time period when the wholesale market is likely to be at its highest, has lower negative impacts than the approach that mimics time-of-use consumption tariffs. It is also more consistent with the Commission's simplicity principle.

14. Are there other time-of-use options that the Commission could consider?

Simply Energy does not support regulated time-of-use FiTs. However, if the Commission decides to recommend a time-of-use FiT then Simply Energy considers that it should be a structure that fully reflects the Commission's simplicity principle. This could be, for example, a single FiT that applies at all times except on summer workday afternoons between 4 PM and 7 PM, when a higher FiT applies. A relatively simple structure like this could be calibrated to reflect any material differences between wholesale prices during peak price periods and those prevailing at other times.

15. Are there other methodologies for calculating the locational benefit of distributed generation?

Page 32 of the Paper sets out the Commission's methodology for calculating the energy value locational benefit of DG, which is based on Australian Energy Market Operator Marginal Loss Factor (MLF) and Distribution Loss Factor (DLF) estimates. Simply Energy considers that the way that energy is metered and settled in the wholesale market means that there are no other energy value locational benefits.

Currently a weighted average approach is used to determine a single FiT that reflects all MLFs and DLFs. Simply Energy considers that this should continue because the differences between energy value locational benefits are not sufficiently material to justify the complexity of locational FiTs.

16. Do you agree with the Commission's view that the environmental benefit of distributed generation may be sufficiently reflected in the payments available under the RET? If not, can you provide evidence to detail what environmental benefits of distributed generation are not already captured by the RET scheme and how they can be valued?

Simply Energy agrees that RET payments at least sufficiently reflect the environmental benefit of RET-eligible distributed generation. See the response to question 10.

17. Are there other methodologies that the Commission could consider for calculating the carbon benefit of distributed generation technologies that are not covered by the RET?

Simply Energy is unaware of any appropriate methodologies other than the carbon intensity approach referred to in the Paper.

If you have any questions about this submission, please contact James Barton, Regulatory Policy Manager on (03) 8807 1171.

Yours sincerely

David Murphy
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